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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,791	09/26/2003	Hernes Jacobs	081468-0306107	1480

909 7590 05/04/2006

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EXAMINER

MATHEWS, ALAN A

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.13

Office Action Summary	Application No.	Applicant(s)	
	10/670,791	JACOBS ET AL.	
	Examiner	Art Unit	
	Alan A. Mathews	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18-27 and 29-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-22 and 31 is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 12, 13, 23, 24, 27 and 29 is/are rejected.
- 7) ☒ Claim(s) 9, 11, 14-16, 25, 26 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/16/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on August 16, 2005, has been entered.

Claim Rejections - 35 USC § 103

2. Claims 1 – 8, 10, 12, 13, 23, 24, 27, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwan et al. (U. S. Patent Application Publication No 2001/0006762) in view of either the Japanese patent document JP 2002-22868 (cited in Applicant's IDS filed August 16, 2005) or the Japanese patent document 5-335199 (cited in Applicant's IDS filed August 16, 2005). Kwan et al. '762 discloses in figure 1 an illuminator LA and Ex. Element WT is the substrate table and MT is the patterning device support for holding the patterning device MA (mask). Element PL is the projection system and element BP is the base frame. Figures 9 and 10 and page 7, paragraph #s 126-132 disclose a balance mass 2 supported by and movable relative to a base frame BP. Figure 3 shows how the balance mass 2 is coupled to the substrate

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table WT. The Japanese patent document JP 2002-22868 discloses in figures 2 and 3 and the Abstract two hinges 5 and 6 supporting a table and an intermediate member. Portions 8 and 9 are pivot points which are flexible and portion 7 is a stiff portion. The Japanese patent document 5-335199 discloses in figures 1, 2 and 3, and the Abstract, hinges 18a, 18b, 18c, and 18d, supporting table 2 on base 17. As shown in figure 2, hinge 18 has two flexible pivot points (18a₃ and 18a₄) and a stiff portion 18a₀. With respect to claims 10 and 24, the drawing at the right in figure 2 discloses displacement, and there would be a horizontal component of force due to gravity, since 18a₀ is bent. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide Kwan et al.'762 with supporting members attached to the balance mass and the base frame wherein the supporting member has a stiff portion and at least two pivot points, and wherein at least one of the pivot points includes a flexible material in view of either the Japanese patent document JP 2002-22868 or the Japanese patent document 5-335199 for the purpose of providing a better positioning control.

Allowable Subject Matter

3. Claims 18-22, and 31 are allowed. Claims 9, 11, 14-16, 25, 26, and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reasons for the indicated allowability of the claims are as follows:

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The prior art does not disclose or suggest wherein a portion of said at least one supporting member that includes one of said at least two pivot points is rotatable relative to a portion of said at least one supporting member that includes another of said at least two pivot points in combination with all the other elements recited in the parent claim to dependent claim 9.

The prior art does not disclose or suggest wherein said at least one supporting member is disposed to provide a compensating force opposing said horizontal force in combination with all the other elements recited in the parent claim to dependent claim 11.

The prior art does not disclose or suggest further comprising elastic structure coupled to the balance mass, wherein said elastic structure is disposed to provide a compensating force opposing said horizontal force in combination with all the other elements recited in the parent claim to dependent claim 14.

The prior art does not disclose or suggest wherein said supporting member comprises: a middle section; at least two base frame connecting members pivotally attached at one end to said middle section and at an other end to said base frame; and at least two balance mass connecting members pivotally attached at one end to said middle section and at an other end to said balance mass in combination with all the other elements recited in independent claim 18.

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The prior art does not disclose or suggest wherein said at least one supporting portion is attached to the base frame above the balance mass in combination with all the other elements recited in the parent claim to dependent claim 25.

The prior art does not disclose or suggest wherein said at least one supporting element includes a cable in combination with all the other elements recited in the parent claim to dependent claim 26.

The prior art does not disclose or suggest wherein a portion of said at least one supporting member that includes one of said at least two pivot points is rotatable relative to a portion of said at least one supporting member that includes another of said at least two pivot points in combination with all the other elements recited in the parent claim to dependent claim 30.

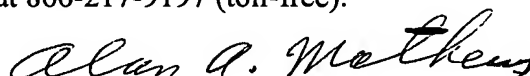
The prior art does not disclose or suggest wherein at least one supporting element is disposed such that on displacement of said balance mass from an equilibrium position in which said pivot points align vertically, a horizontal force in the direction of the displacement is generated by the action of gravity, and wherein said supporting said balance mass includes using elastic structure coupled to the balance mass to provide a compensating force opposing the horizontal force in combination with all the other elements recited in independent claim 31.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan A. Mathews whose telephone number is (571) 272-2123. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alan A. Mathews
Primary Examiner
Art Unit 2851

AM